ABSTRACT OF THE DISCLOSURE

A power switching control device and methods for using the same to control a magnetic actuator within a power switching device are disclosed. The power switching control device uses a series of modulated current pulses to control a magnetic actuator within a power switching device. The power switching control device inputs a power signal and applies a series of modulated current pulses through the coil of the magnetic actuator in a first direction such that the actuator moves from a first position to a second position. Certain operating characteristics of a power switching device can be ascertained by analyzing the impedance of the magnetic actuator coil within the power switching device. The power switching device control device also has an improved energy management system therein. In this manner, the controller includes a voltage regulator that has the ability to switch between operating modes.